



US 20060157030A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2006/0157030 A1**

**Knight et al.**

(43) **Pub. Date: Jul. 20, 2006**

(54) **FUEL INJECTION SYSTEM**

Feb. 17, 2003 (EP) ..... 03250957.2

(76) Inventors: **Andrew Knight**, Stroud (GB);  
**Anthony Williams**, Middlesex (GB)

**Publication Classification**

Correspondence Address:  
**DELPHI TECHNOLOGIES, INC.**  
M/C 480-410-202  
PO BOX 5052  
TROY, MI 48007 (US)

(51) **Int. Cl.**  
*F02M 63/00* (2006.01)  
(52) **U.S. Cl.** ..... 123/447

(57) **ABSTRACT**

(21) Appl. No.: **11/343,098**

(22) Filed: **Jan. 30, 2006**

**Related U.S. Application Data**

(63) Continuation of application No. 10/427,229, filed on  
May 1, 2003, now Pat. No. 7,047,941.

**Foreign Application Priority Data**

May 3, 2002 (GB) ..... 0210305.9  
Jul. 4, 2002 (GB) ..... 0215487.0  
Oct. 31, 2002 (GB) ..... 0225392.0  
Apr. 7, 2003 (EP) ..... 03252188.2

A fuel injection system for supplying pressurised fuel to a fuel injector, the fuel injection system comprising an accumulator volume for supplying fuel at a first injectable pressure level to the fuel injector through a fuel supply passage, a pump arrangement for increasing the pressure of fuel supplied to the injector to a second injectable pressure level, and a valve arrangement operable between a first position in which fuel at the first injectable pressure level is supplied to the injector and a second position in which communication between the injector and the accumulator volume is broken so as to permit fuel at the second injectable pressure to be supplied to the injector. The injection system may include a valve arrangement in the form of a three-position valve or may include a shut off valve for controlling the supply of fuel through the fuel supply passage.

